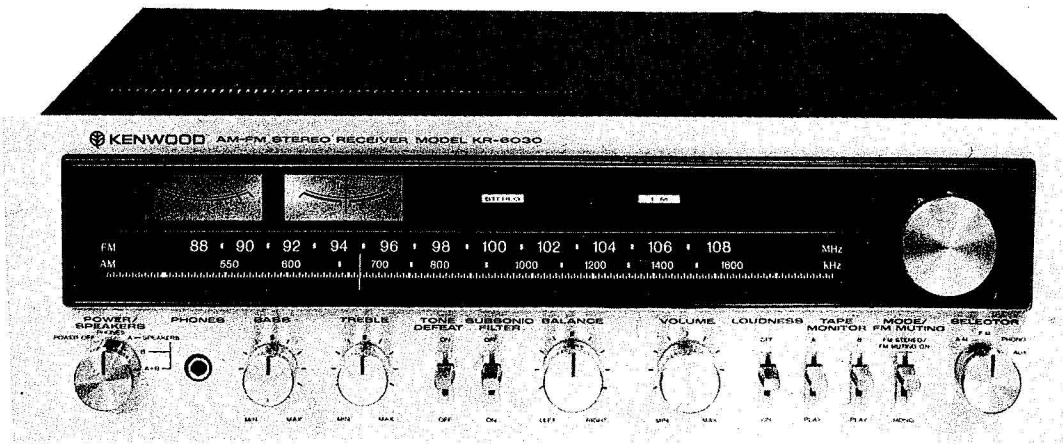
KENWOOD

HI/FI STEREO COMPONENTS

SERVICE MANUAL

KR-6030

(KR-6330)



AM-FM STEREO RECEIVER

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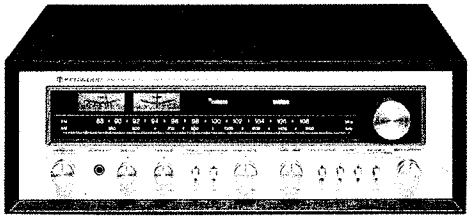


Photo is U type.

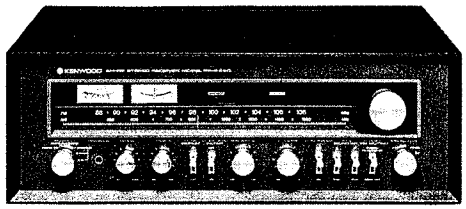
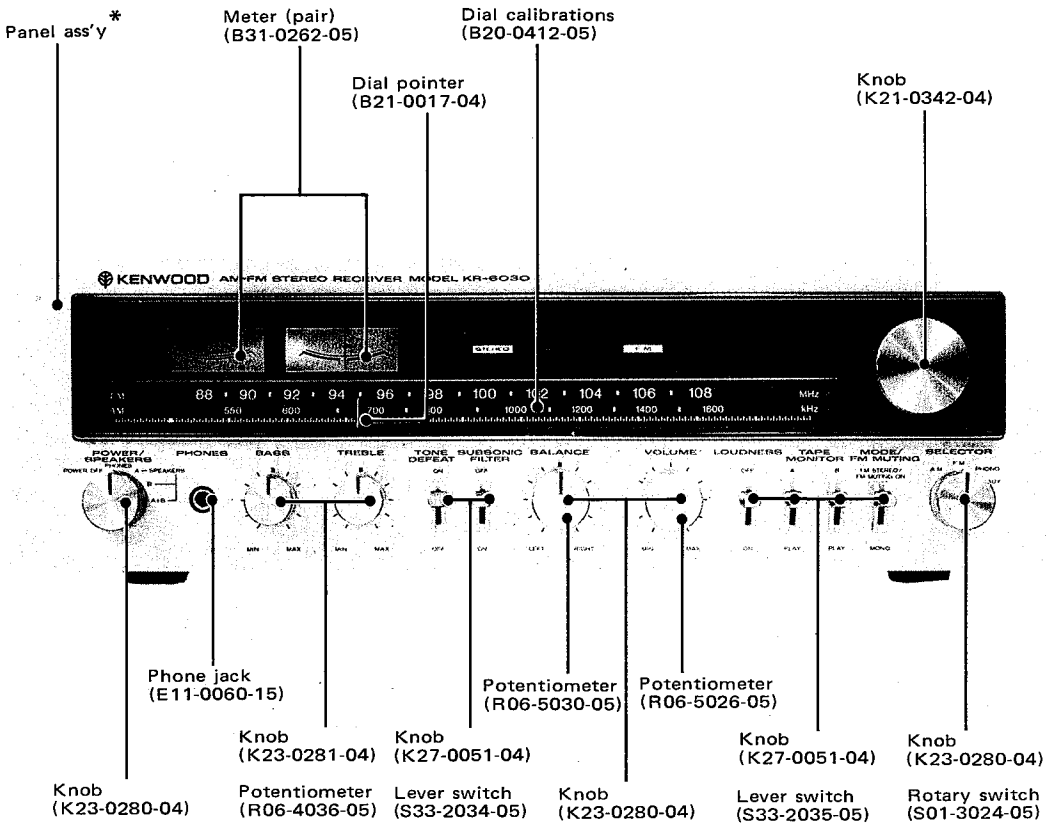


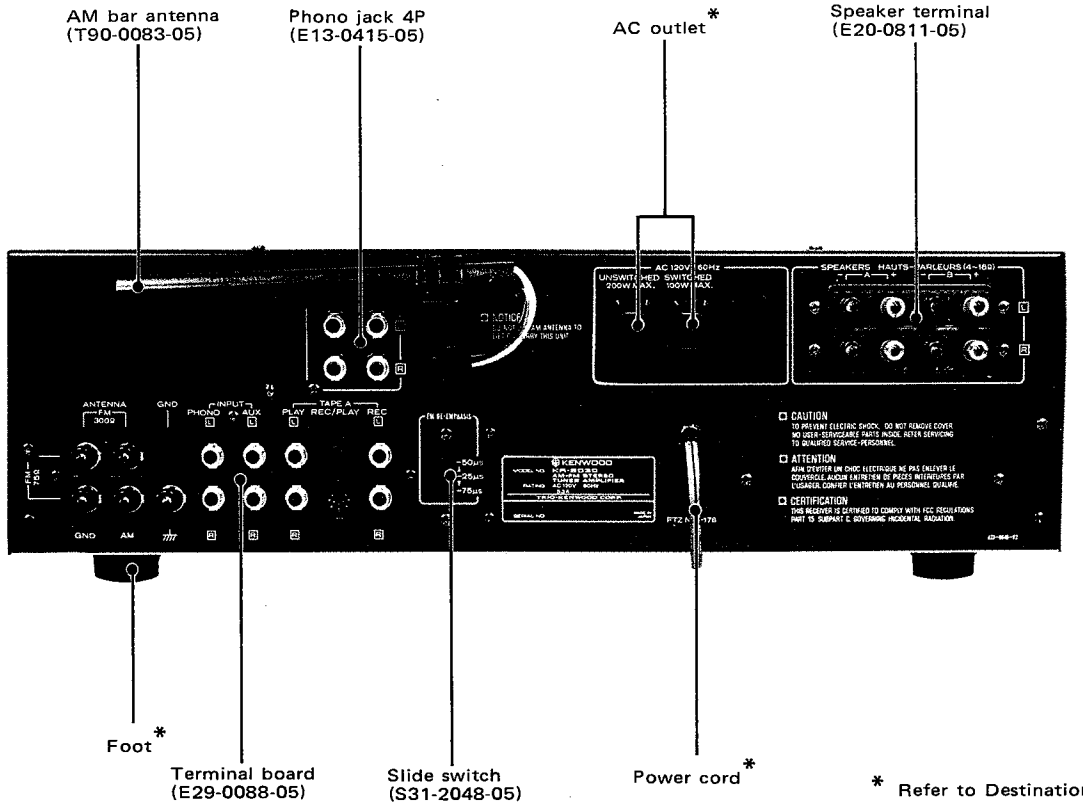
Photo is KR-6330.

Note:
The products are subject to modification in components and circuits in different countries and regions. This is because each product must be used under the best condition. This manual provides information of modification based on the standard in the U.S., for the convenience of ordering associated components and parts.

U.S.A.	K
Canada	P
PX	U
Australia	X
Europe	W
England	T
Scandinavia	L
South Africa	S
Other Areas	M
Audio Club	KR-6330

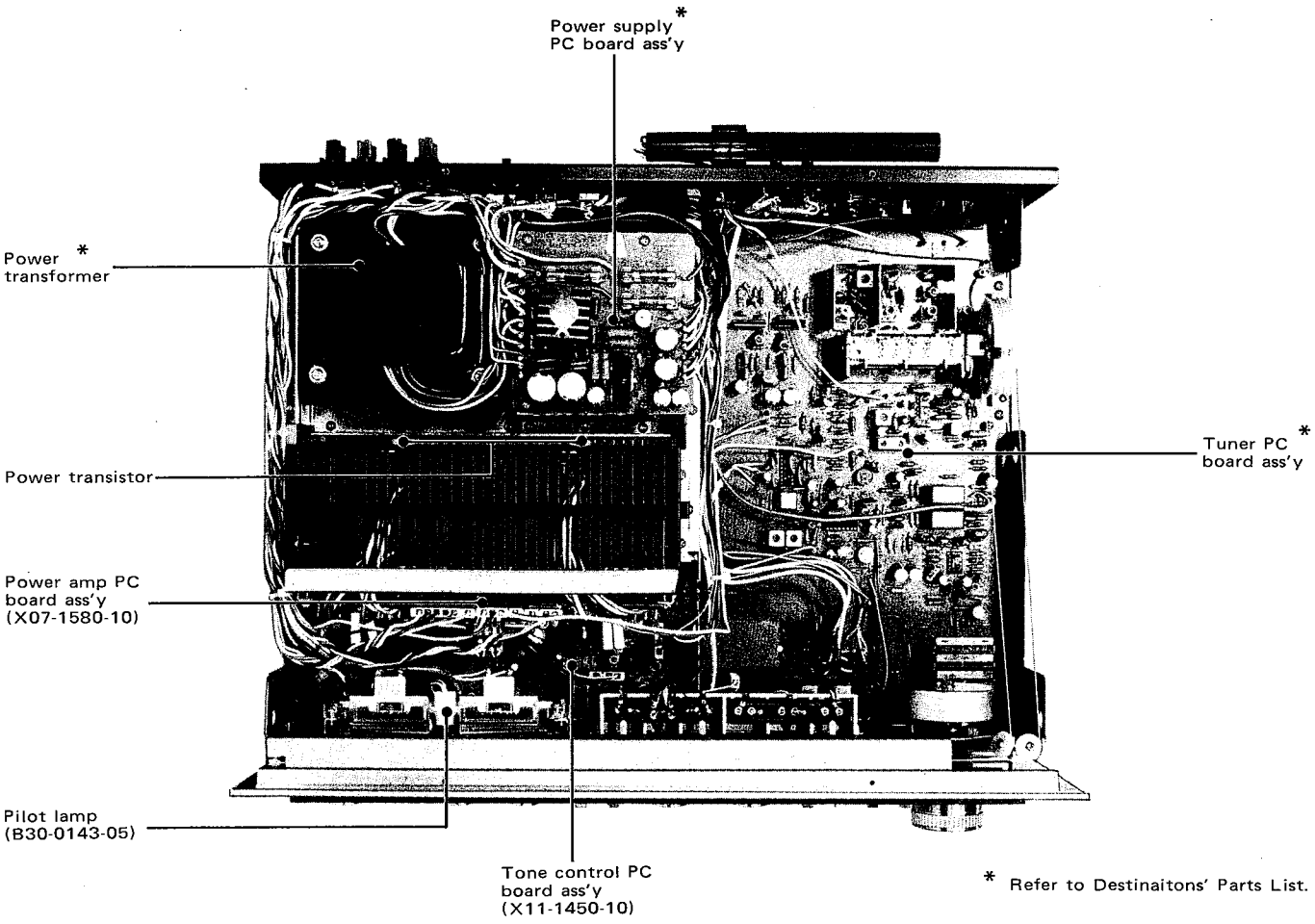
EXTERNAL VIEW





* Refer to Destinations' Parts List.

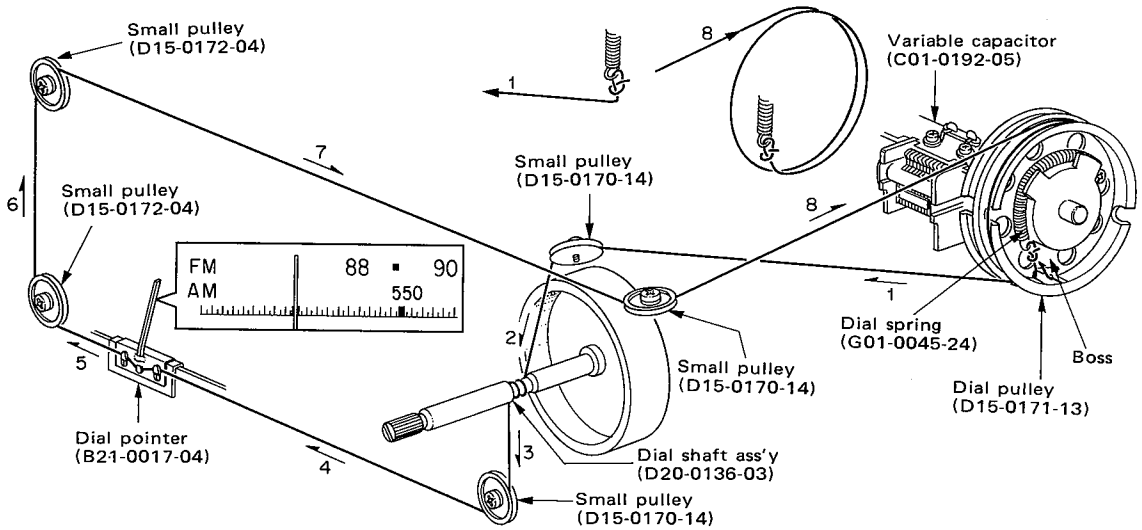
INTERNAL VIEW/DIAL CORD STRINGING



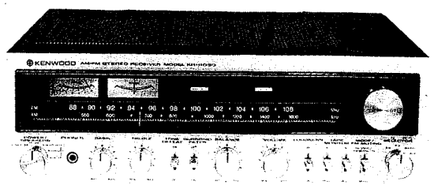
* Refer to Destinaitons' Parts List.

DIAL CORD STRINGING

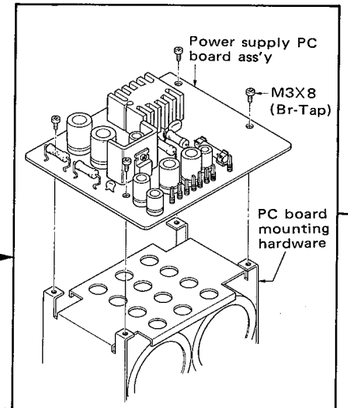
1. Fully close the variable capacitor.
2. Set the dial pulley as illustrated, and fix it with a screw.
3. Tie the end of the dial cord at the dial spring, giving a margin of about 10 cm.
4. Hook the spring on the boss.
5. Dress the dial cord in the direction of "1" to "2", and wind it 2 turns around the dial shaft counterclockwise.
6. Dress the dial cord in the direction of "3" through "8", and wind it one and half turns around the dial pulley starting from its upper side.
7. Tie the dial cord rigidly with the margin cord (about 10 cm, described in 3, above) without permitting any slack.
8. Cut off the unnecessary part of the cord, and release the dial spring from the boss.
9. Mount the dial pointer in position as illustrated. This setting should be checked by receiving a suitable broadcast station actually.



DISASSEMBLY FOR REPAIR

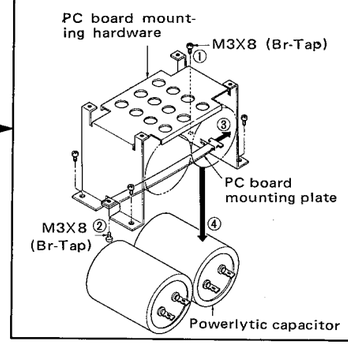


POWER SUPPLY

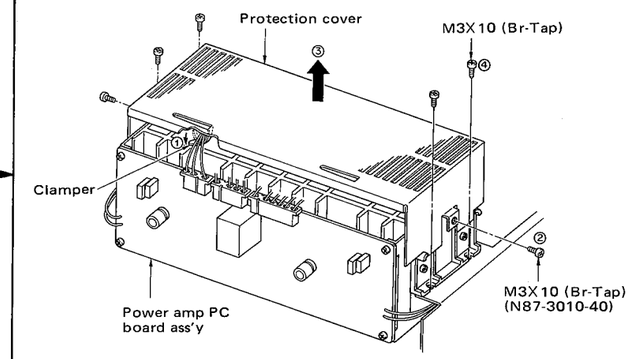


POWERYTIC CAPACITOR

①, ② Remove the screws.
③ Pull out the PC board mounting plate.
④ The powerlytic capacitor can be replaced.

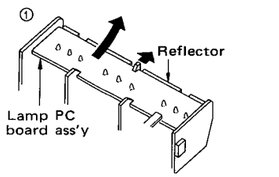


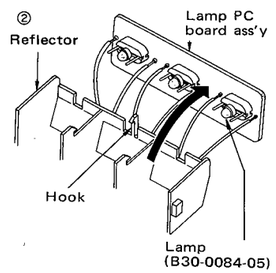
POWER AMP



① Pull out the lead wires from the clamper of a protection cover.
② Remove the screws.
③ Remove the protection cover.
④ Remove the screws, and the power amp block can be pulled out.

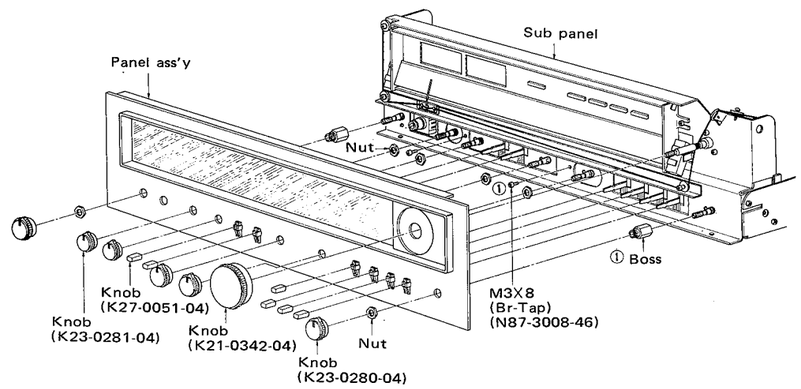
LAMP PC BOARD ASS'Y



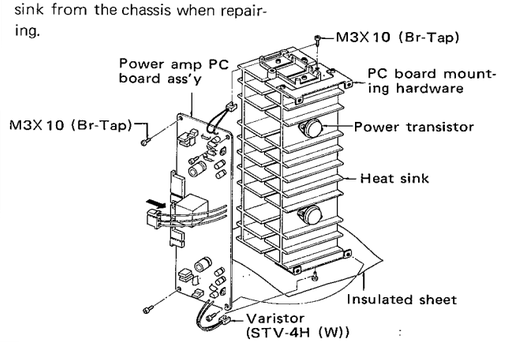


The lamp PC board ass'y can be removed by pulling up the hook.

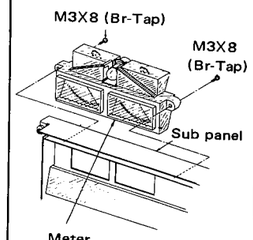
PANEL ASS'Y



Note:
Since +50V or −50V is fed to the heat sink directly, insulate the heat sink from the chassis when repairing.



METER

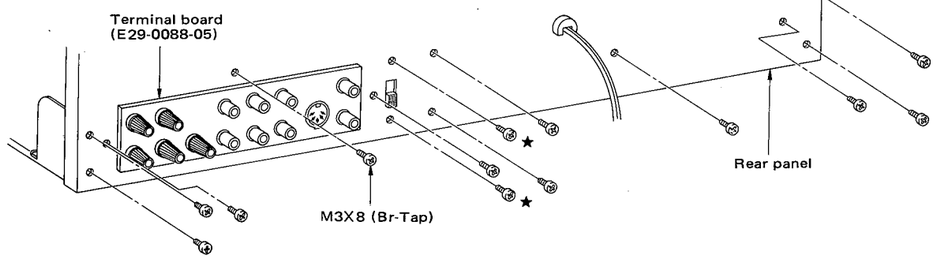


① Remove the protection cover.
② The meter can be removed by removing the screws illustrated.

REAR PANEL ASS'Y

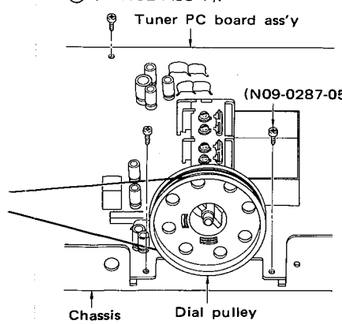
Rear panel can be removed by removing the screws illustrated.

Note:
It is not necessary to remove the star-marked screws (★).

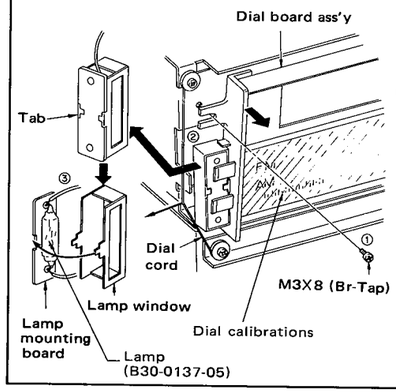


TUNER PC BOARD ASS'Y

The tuner PC board ass'y (X05-1500-) can be removed by removing the screws illustrated, the screw ① (PANEL ASS'Y) and the boss ① (PANEL ASS'Y).



DIAL CALIBRATIONS' LAMP



① Remove the screw.
② Take out the lamp window.
③ Extend the tab, and the lamp can be replaced.

Note:
The dial calibrations can be removed by removing the dial board ass'y and the lamp window.

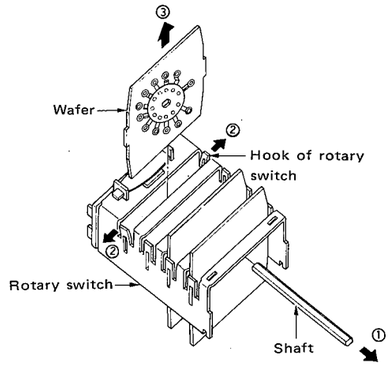
KR-6030 KR-6030

DISASSEMBLY FOR REPAIR/BLOCK DIAGRAM

REPLACEMENT OF ROTARY SWITCH WAFER

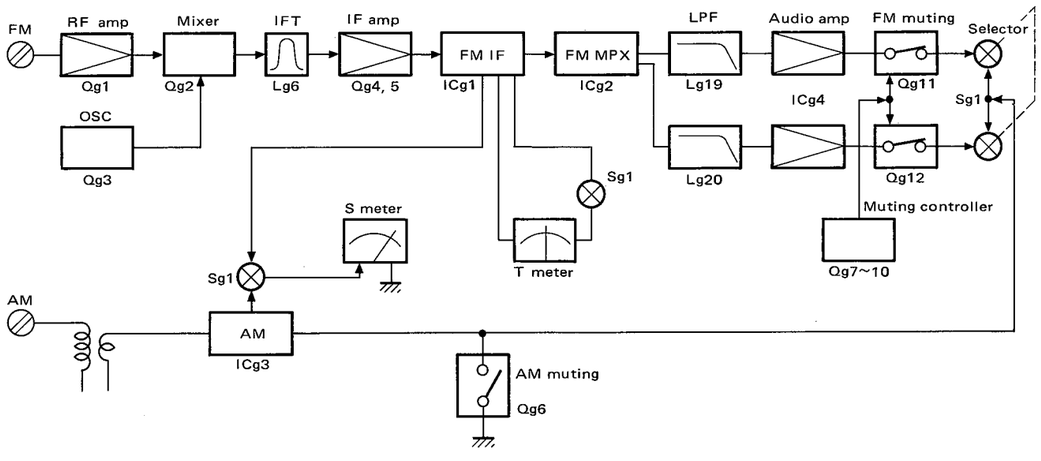
When the rotary switch is faulty, replace the defective wafer as follows.

① Pull out the rotary switch shaft.
② Loose the hook fixing the wafer.
③ Pull out the defective wafer, after unsoldering its feet, and replace it with a new one.

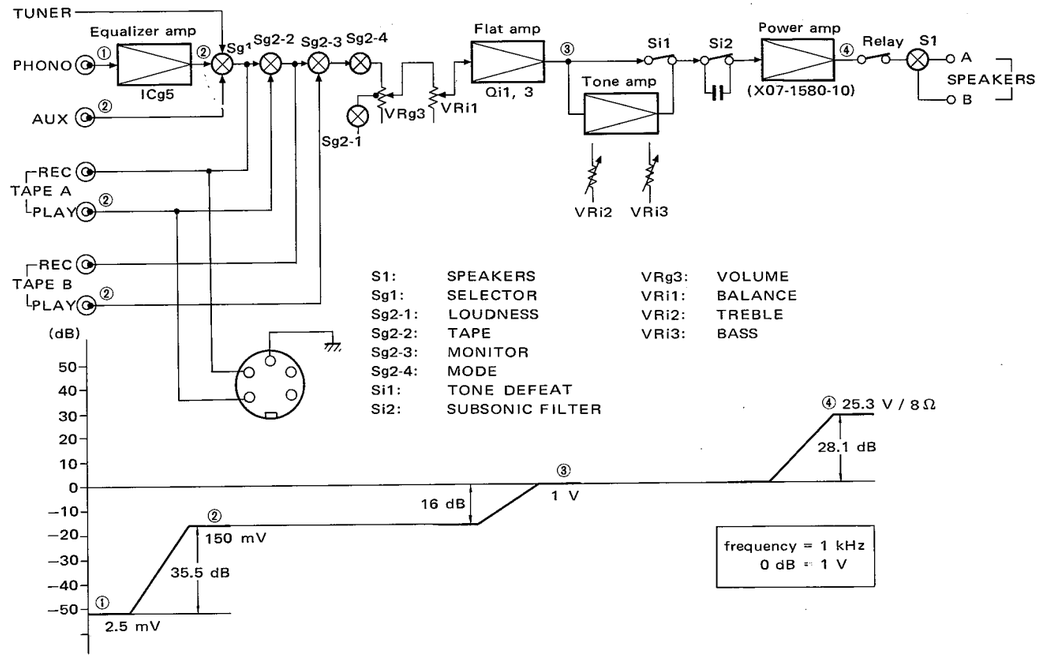


BLOCK DIAGRAM

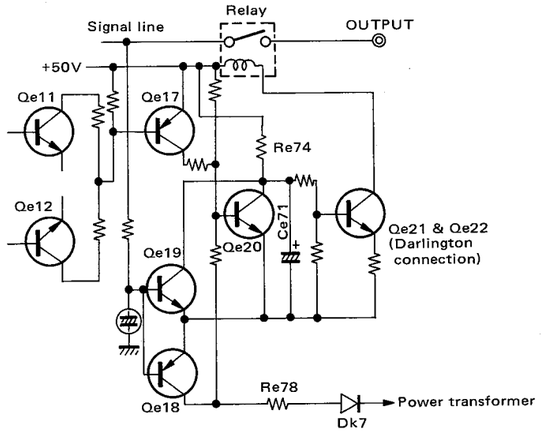
TUNER SECTION



BLOCK & LEVEL DIAGRAM/CIRCUIT DESCRIPTION



PROTECTION CIRCUIT



This circuit operates for ASO detection, DC detection and power on-off shock noise prevention.

POWER ON-OFF SHOCK NOISE PREVENTION

When the power switch is turned on, charging current flows into Ce71 from +50 V. Since Qe22 does not turn on unless Ce71 is completely charged and the base potential exceeds 1.2 volt, time constant of Ce71 and Re74 is made to be more than the time necessary for circuit stabilization. Thus shock noise cannot appear at the output circuit.
Since Qe20 is forward-biased to turn on after the power switch has been turned off, Qe21 and Qe22 are turned off to release the relay. This depends that −B discharges faster than +B does.

ASO DETECTION

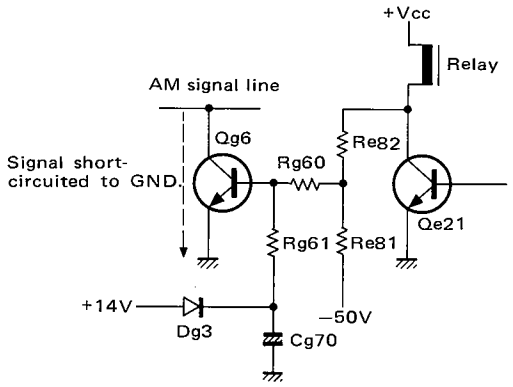
Qe11 (Qe12) is turned on when the overcurrent flows into the power transistors. Then, Qe17 turns on, Qe20 turns on, Qe21 and Qe22 turn off, and the relay is released.

CIRCUIT DESCRIPTION

DC DETECTION

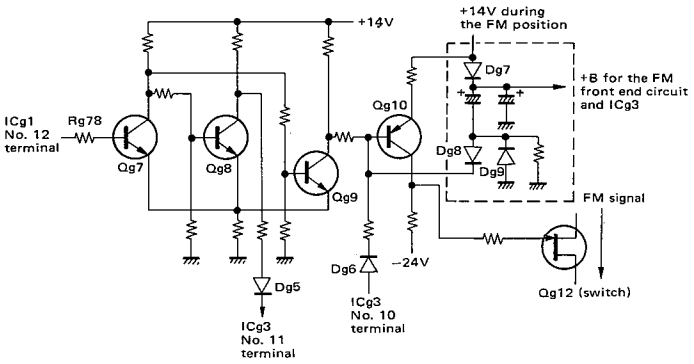
The relay is released when DC voltage appears at the output terminals. Thus the loudspeaker system can be protected. When positive (+) potential is generated at the output terminals, Qe19 is turned on to turn off Qe21 and Qe22, and the relay is released. When negative (−) potential appears at the output terminals, Qe18 is turned on to turn on Qe20. This causes Qe21 and Qe22 to turn off, and the relay to be released.

MUTING OPERATION FOR AM



Transistor Qg6 composes an AM muting circuit. When the selector switch, Sg1, is set in the FM position, +14 V is applied to the anode of Dg3. Then voltage is applied to the base of Qg6 to turn it on. The AM signal is transferred to the GND circuit and the tuner output cannot be fed to the preamplifier. In the AM position, voltage to the base is applied from the −50 V and Qg 6 is turned off. The signal is then fed to the preamplifier. When the power switch, S1, is turned off while the selector switch is in the AM position, there may be a signal leakage.
To avoid it, the AM signal is transferred to the GND circuit simultaneously when the power switch is turned off. When the power switch is off, the relay driving transistor Qe21 is also off and the collector potential is raised as a result. This potential is applied to the base of Qg6 through Rg82, and the AM signal is led to the GND circuit as described previously.

MUTING OPERATION FOR FM



	Qg7	Qg8	Qg9	Qg10	Qg12 (switch)
During tuning	off	on	on	on	short-circuit
During detuning	on	off	off	off	open

The schematic is an FM muting circuit, which is controlled by No. 12 terminal voltage of IC HA1137W. Voltage at No. 12 terminal is 0 volt during tuning and 0.8 volt during detuning.
When Qg8 is turned off, +B is applied to No. 11 terminal of ICg3 to stop the stereo operation.
Qg10 is turned on a few seconds after switching over from the other function to FM. This is controlled by a delay circuit.

☆ : New parts

Ref. No.	U.S.A. (K)	Canada (P)	PX (U)	Australia (X)	Europe (W)	Scandinavia (L)	England (T)	Other Area (M)	KR-6330	Description
C1, 2	C90-0145-05	C91-0025-05	C91-0023-05	C91-0023-05	CK45E3D-103PMU	CK45E3D-103PMU	CK45E3D-103PMU	C91-0023-05	C91-0023-05	Ceramic or film capacitor 0.01μF
C3	–	–	–	–	CK45E3D-103PMU	CK45E3D-103PMU	CK45E3D-103PMU	–	–	Ceramic capacitor 0.01μF
–	A01-0328-02	A01-0328-02	A01-0329-02	A01-0328-02	A01-0328-02	A01-0328-02	A01-0328-02	A01-0328-02	A01-0329-02	Case
–	–	–	A03-0229-02	–	–	–	–	–	A03-0229-02	Cabinet
–	A20-1229-03	A20-1229-03	A20-1229-03	A20-1229-03	A20-1229-03	A20-1229-03	A20-1230-03	A20-1229-03	A20-1231-03	Panel ass'y ☆
–	B46-0061-10	B46-0055-20	B46-0062-10 B46-0063-00	B46-0064-00	–	–	B46-0060-00	–	B46-0062-10	Warranty card
–	B50-1689-00	B50-1691-00	B50-1689-00	B50-1689-00	B50-1689-00	B50-1689-00	B50-1690-00	B50-1691-00	B50-1692-00	Instruction manual ☆
–	–	–	D32-0075-04	D32-0075-04	D32-0075-04	–	–	D32-0075-04	D32-0075-04	Switch stopper (AC voltage selector)
–	–	–	–	–	E04-0004-05	E04-0004-05	E04-0004-05	–	–	DIN type coaxial connector
–	E08-0225-05	E08-0225-05	E08-0225-05	E08-0225-05	–	–	–	E08-0225-05	E08-0225-05	AC outlet X 2
–	E30-0181-05	E30-0181-05	E30-0545-05	E30-0185-05	E30-0580-05	E30-0292-05	E30-0602-05	E30-0545-05	E30-0580-05	Power cord
–	H01-1778-04	H01-1779-04	H01-1781-04	H01-1778-04	H01-1778-04	H01-1778-04	H01-1780-04	H01-1778-04	H01-1782-04	Carton box ☆
–	H10-1505-02	H10-1505-02	H10-1507-02	H10-1505-02	H10-1505-02	H10-1505-02	H10-1505-02	H10-1505-02	H10-1507-02	Polystyrene foamed fixture
–	H10-1506-02	H10-1506-02	H10-1507-02	H10-1506-02	H10-1506-02	H10-1506-02	H10-1506-02	H10-1506-02	H10-1507-02	Polystyrene foamed fixture
–	H20-0394-04	H20-0394-04	H20-0445-04	H20-0394-04	H20-0394-04	H20-0394-04	H20-0394-04	H20-0416-04	H20-0445-04	Polyethylene cover
–	–	–	–	–	–	–	–	H40-0004-04	–	Anti-rust paper
–	J02-0092-05	J02-0092-05	J02-0049-14	J02-0092-05	J02-0092-05	J02-0092-05	J02-0092-05	J02-0092-05	J02-0049-14	Foot X 4
–	J32-0238-04	J32-0238-04	☆ J32-0240-04	J32-0238-04	J32-0238-04	J32-0238-04	J32-0238-04	J32-0238-04	☆ J32-0240-04	Boss X 2
–	J41-0034-05	J41-0034-05	J41-0034-05	J41-0024-15	J41-0033-05	J41-0033-05	J41-0024-15	J41-0034-05	J41-0033-05	Power cord bushing
–	–	–	–	–	–	J61-0038-05	–	–	–	Power cord band
–	L01-1451-05	L01-1451-05	L01-1455-05	L01-1455-05	L01-1456-05	L01-1452-05	L01-1457-05	L01-1455-05	L01-1455-05	Power transformer ☆
–	N08-0125-05	N08-0125-05	–	N08-0125-05	N08-0125-05	N08-0125-05	N08-0125-05	N08-0125-05	–	Dress screw (case) X 4
–	–	–	N09-0290-05	–	–	–	–	–	N09-0290-05	Screw with square washer (cabinet) X 5
–	–	–	N61-4116-46	–	–	–	–	–	N61-4116-46	Round head screw X 4 for foot
S1	S02-2005-05	S02-2005-05	S02-2006-05	S02-2006-05	S02-2007-05	S02-2007-05	S02-2007-05	S02-2006-05	S02-2006-05	Rotary switch (power) ☆
–	–	–	S31-2001-05	S31-2001-05	S31-2001-05	–	–	S31-2001-05	S31-2001-05	Slide switch
–	X00-1960-10	X00-1960-10	X00-1960-81	X00-1960-81	X00-1960-61	X00-1961-71	X00-1961-71	X00-1960-81	X00-1960-81	Power supply PC board ass'y ☆
–	X05-1500-10	X05-1500-10	X05-1500-81	X05-1500-81	X05-1500-61	X05-1500-61	X05-1500-61	X05-1500-81	X05-1500-81	Tuner PC board ass'y ☆

PARTS LIST

TOTAL

☆ : New parts

Ref. No.	Parts No.	Description	Remarks
		RESISTOR	
R1, 2	RS14AB3A561J	Metal film 560Ω ±5% 1W	
R3, 4	RD14BY2E154J	Carbon 150kΩ ±5% 1/4W	
		MISCELLANEOUS	
–	A70-0110-05	Dial board ass'y	
–	A30-0133-05	Back board	
–	B08-3013-05	Indicator board	
–	B20-0412-05	Dial calibrations	
–	B30-0137-05	Lamp X 2 8V, 200mA	
–	B01-0114-03	Dial escutcheon	
–	B07-0205-04	Lever switch escutcheon X 6	
–	B21-0017-04	Dial pointer	
–	B30-0143-05	Pilot lamp for meter 300mA	
–	B31-0262-05	Meter	
–	D15-0170-14	Small pulley X 3	
–	D15-0171-13	Dial pulley	
–	D15-0172-04	Small pulley X 2	
–	D20-0136-03	Dial shaft	
–	D32-0084-04	Switch stopper (DE-EMPHASIS)	
–	E11-0060-15	Phone jack	
–	E13-0415-05	Phono jack (4P)	
–	E20-0811-05	Speaker terminal board (8P)	
–	G01-0045-24	Dial spring for pulley	
–	H25-0078-00	Instruction bag	
–	J19-0507-05	Antenna holder	
–	J61-0024-05	Wire clamper	
–	K21-0342-04	Knob (TUNING)	
–	K23-0280-04	Knob (SELECTOR, etc.) X 4	
–	K23-0281-04	Knob (TONE) X 2	
–	K27-0051-04	Knob (Lever switch) X 6	
–	N09-0293-05	Screw for pulley X 5	
–	N10-2090-46	Hex. head nut for panel X 2	
–	N14-0115-05	Flange nut for transformer X 4	
–	T90-0083-05	AM bar antenna	
–	T90-0202-05	FM indoor antenna	
–	X07-1580-10	Power amplifier PC board ass'y	☆
–	X11-1450-10	Tone control PC board ass'y	☆

POWER SUPPLY (X00-1960-10, -61, -81) (X00-1961-71)

Ref. No.	Parts No.	Description	Remarks
		CAPACITOR	
Ck1~4	C91-0039-05	Metalized polyester 0.1μF 250WV	
Ck5~8	CK45E2H103P	Ceramic 0.01μF +100%,–0%	
Ck9, 10	CE04W1J221	Electrolytic 220μF 63WV	
Ck11, 12	CE04W1V221	Electrolytic 220μF 35WV	
Ck13	CE04W1V101	Electrolytic 100μF 35WV	
Ck14	CK45B1H561K	Ceramic 560pF ±10%	
Ck15	CE04W1C221	Electrolytic 220μF 16WV	
Ck16	CE04W1C101	Electrolytic 100μF 16WV	
Ck17	CE04W1C221	Electrolytic 220μF 16WV	
Ck18, 19	C90-0365-05	Electrolytic 12000μF 63WV	☆

Ref. No.	Parts No.	Description	Remarks
		RESISTOR	
Rk1, 2	RS14GB3D471J	Metal film 470Ω ±5% 2W	
Rk3, 4	RS14GB3D820J	Metal film 82Ω ±5% 2W	
Rk5, 6	RC05GF2H152K	Carbon 1.5kΩ ±10% 1/2W	
Rk7	RD14GY2E561J	Carbon 560Ω ±5% 1/4W	
Rk10	RC05GF2H225M	Carbon 2.2MΩ ±20% 1/2W	
		SEMICONDUCTOR	
Qk1	V03-0330-05	Transistor 2SC789	
	V04-0526-10	or 2SD526	
Dk1	V11-0415-05	Rectifier stack diodes M4C-5	
Dk2	V11-1300-40	Bridge diodes S1RBA-20	☆
Dk3, 4	V11-0287-05	Zener diode WZ-240	
Dk5	V11-0254-05	Zener diode YZ-140	
Dk7	V11-0295-05	Diode W06B	
		FUSE	
Fk1	F05-6024-05	Fuse 6A **(X00-1960-10)**	
Fk1	F05-3122-05	Fuse 3.15A **(X00-1961-71)**	
Fk1, 2	F05-3122-05	Fuse 3.15A **(X00-1960-61)**	
Fk1, 2	F05-3022-05	Fuse 3A **(X00-1960-81)**	
Fk3	F05-1021-05	Fuse 1A **(X00-1960-10)**	
Fk3	F06-1021-05	Fuse 1A **(X00-1960-61, -1961-71)**	
Fk3	F05-1023-05	Fuse 1A **(X00-1960-81)**	
		MISCELLANEOUS	
Lk1, 2	L40-1021-45	Ferri-inductor 1mH	
–	E22-0424-05	Lug type terminal **(X00-1960-61, -1961-71)**	
–	J13-0055-05	Fuse clip X 4 **(X00-1960-10, -1961-71)**	
–	J13-0055-05	Fuse clip X 6 **(X00-1960-61, -1960-81)**	

TUNER (X05-1500-10, -61, -81)

Ref. No.	Parts No.	Description	Remarks
		CAPACITOR	
Cg1	CK45F1H103Z	Ceramic 0.01μF +80%,–20%	
Cg2	CC45SL1H101K	Ceramic 100pF ±10%	
Cg3	CC45CH1H150K	Ceramic 15pF ±10%	
Cg4, 5	CK45F1H103Z	Ceramic 0.01μF +80%,–20%	
Cg6	CC45CH1H200J	Ceramic 20pF ±5%	
Cg7	CC45CH1H180J	Ceramic 18pF ±5%	
Cg8	CC45SL1H120K	Ceramic 12pF ±10%	
Cg9	CC45SL1H100D	Ceramic 10pF ±0.5pF	
Cg10	CC45CH1H020C	Ceramic 2pF ±0.25pF	
Cg11	CC45SL1H221K	Ceramic 220pF ±10%	
Cg12	CK45F1H103Z	Ceramic 0.01μF +80%,–20%	
Cg13	CC45RH1H220J	Ceramic 22pF ±5%	
Cg14	CC45SH1H100D	Ceramic 10pF ±0.5pF	
Cg15	CC45CH1H390K	Ceramic 39pF ±10%	
Cg16	CC45CH1H150K	Ceramic 15pF ±10%	
Cg17~20	CK45F1H103Z	Ceramic 0.01μF +80%,–20%	
Cg22~26	CK45F1H103Z	Ceramic 0.01μF +80%,–20%	

PARTS LIST

Ref. No.	Parts No.	Description	Remarks
Cg27	CC45SL1H221K	Ceramic 220pF ±10%	
Cg28	CK45F1H103Z	Ceramic 0.01μF +80%,−20%	
Cg29	CE04W1H010	Electrolytic 1μF 50WV	
Cg30, 31	CK45F1H103Z	Ceramic 0.01μF +80%,−20%	
Cg32	CE04W1E4R7	Electrolytic 4.7μF 25WV	
Cg33	CK45F1H473Z	Ceramic 0.047μF+80%,−20%	
Cg34	CE04W1E100	Electrolytic 10μF 25WV	
Cg35	CK45F1H473Z	Ceramic 0.047μF +80%,−20%	
Cg36~38	CK45F1H103Z	Ceramic 0.01μF +80%,−20%	
Cg39	CE04W0J101	Electrolytic 100μF 6.3WV	
Cg41	CC45SL1H101K	Ceramic 100pF ±10% **(X05-1500-61)**	
Cg51	CQ09FS1H361J	Polystyrene 360pF ±5%	
Cg52	CC45UJ1H150K	Ceramic 15pF ±10%	
Cg53	CK45F1H103Z	Ceramic 0.01μF +80%,−20%	
Cg54	CQ93M1H122M	Mylar 1200pF ±20%	
Cg55	CE04W1E100	Electrolytic 10μF 25WV	
Cg56, 57	CC45SL1H150K	Ceramic 15pF ±10%	
Cg58	CQ93M1H123M	Mylar 0.012μF ±20%	
Cg59, 60	CK45F1H103Z	Ceramic 0.01μF +80%,−20%	
Cg61	CE04W1E100	Electrolytic 10μF 25WV	
Cg62	CK45F1H473Z	Ceramic 0.047μF +80%,−20%	
Cg63	CE04W1H010	Electrolytic 1μF 50WV	
Cg64	CE04W1E100	Electrolytic 10μF 25WV	
Cg65	CQ93M1H123M	Mylar 0.012μF ±20%	
Cg66	CQ93M1H122M	Mylar 1200pF ±20%	
Cg67	CK45F1H103Z	Ceramic 0.01μF +80%,−20%	
Cg68	CQ93M1H683M	Mylar 0.068μF ±20%	
Cg69	CK45F1H103Z	Ceramic 0.01μF +80%,−20%	
Cg70	CE04W1C470	Electrolytic 47μF 16WV	
Cg81	CQ93M1H122M	Mylar 1200pF ±20%	
Cg82	CQ93M1H473M	Mylar 0.047μF ±20%	
Cg83	CE04W1E4R7	Electrolytic 4.7μF 25WV	
Cg84	CE04W1C470	Electrolytic 47μF 16WV	
Cg85, 86	CE04W1E4R7	Electrolytic 4.7μF 25WV	
Cg88	CQ09FS1H152J	Polystyrene 1500pF ±5%	
Cg89	CE04W1HR47	Electrolytic 0.47μF 50WV	
Cg90	CE04W1HR22	Electrolytic 0.22μF 50WV	
Cg91	CE04W1H010	Electrolytic 1μF 50WV	
Cg92	CE04W1E100	Electrolytic 10μF 25WV	
Cg93, 94	CE04W1C470	Electrolytic 47μF 16WV	
Cg95, 96	CQ09FS1H911J	Polystyrene 910pF ±5%	
Cg97~100	CQ92M1H124MDA	Mylar 0.12μF ±20%	
Cg101,102	CE04W1E100	Electrolytic 10μF 25WV	
Cg103,104	CE04W1E4R7	Electrolytic 4.7μF 25WV	
Cg105,106	CQ93M1H102J	Mylar 1000pF ±5%	
Cg107,108	CQ93M1H202J	Mylar 2000pF ±5%	
Cg121,122	CC45SL1H470K	Ceramic 47pF ±10%	
Cg123, 124	CS15E1A3R3M	Tantalum 3.3μF 10WV	
Cg125, 126	CE04W1A470	Electrolytic 47μF 10WV	
Cg127, 128	CC45SL1H101K	Ceramic 100pF ±10%	
Cg129, 130	CC45SL1H220K	Ceramic 22pF ±10%	
Cg131, 132	CQ93M1H272J	Mylar 2700pF ±5%	
Cg133, 134	CQ93M1H103J	Mylar 0.01μF ±5%	
Cg135, 136	CE04AW1H4R7M	Electrolytic 4.7μF 50WV	
Cg139, 140	CQ93M1H273K	Mylar 0.027μF ±10%	
Cg141, 142	CE04W1E101	Electrolytic 100μF 25WV	
Cg143~146	CK45F1H103Z	Ceramic 0.01μF +80%,−20%	
RESISTOR			
Rg1, 2, 21 30, 34, 51	RD14GY2E101J	Carbon 100Ω ±5% 1/4W	
Rg77	RD14GY2E121J	Carbon 120Ω ±5% 1/4W	
Rg111, 112	RC05GF2H106M	Carbon 10MΩ ±20% 1/2W	
Rg145, 146	RD14GY2E221J	Carbon 220Ω ±5% 1/4W	
SEMICONDUCTOR			
Qg1	V09-0125-10	FET 3SK59(GR), (Y)	
Qg2	V03-1923-10	Transistor 2SC1923(R), (O)	
Qg3	V03-0357-05	Transistor 2SC1342(A), (B)	

Ref. No.	Parts No.	Description	Remarks
Qg4, 5	V03-1923-10	Transistor 2SC1923(R), (O)	
Qg6~9	V03-0405-05	Transistor 2SC945(P), (Q), (R)	
	V03-0504-05	or 2SC828A(P), (Q), (R)	
Qg10	V01-0733-10	Transistor 2SA733(P), (Q)	
		or 2SA564A	
	V01-0190-05	or 2SA841(GR), (BL)	
	V01-0146-05	or 2SA640(E), (F)	
Qg11, 12	V09-0126-20	FET 2SK117(Y),(GR),(BL)	
	V09-0110-05	or 2SK68(L), (M)	
		or 2SK105(F), (H)	
ICg1	V30-0133-05	IC HA1137W	
ICg2	V30-0196-05	IC HA1197	
	V30-0245-10	or LA1240	
ICg3	V30-0244-10	IC LA3350S-L6	
ICg4	V30-0217-05	IC NJM4558D(A), (B)	
ICg5, 6	V30-0264-10	IC HA1457	
Dg1~3	V11-0076-05	Diode 1S1555	
	V11-0271-05	or 1S2076	
Dg4	V11-0247-05	Zener diode WZ-100	
Dg5~9	V11-0076-05	Diode 1S1555	
	V11-0271-05	or 1S2076	
VC/TRIMMER			
—	C01-0192-05	Variable capacitor	
TCg1	C05-0055-05	Ceramic trimmer	
POTENTIOMETER			
VRg1	R12-1002-05	Trimming SEP 1kΩ	
VRg2	R12-1028-05	Trimming VCO 4.7kΩ	
VRg3	R06-5026-05	VOLUME 100kΩ X 2	
COIL/IFT/INDUCTOR/FILTER			
Lg1	L31-0361-05	FM ANT coil	
Lg2	L31-0373-05	FM RF1 coil	
Lg3	L31-0374-05	FM RF2 coil	
Lg4	L40-1091-41	Inductor 1μH	
Lg5	L32-0192-05	FM OSC coil	
Lg6	L30-0282-05	FM IFT	
Lg7	L40-1805-25	Inductor 18μH	
Lg8	L40-1011-03	Inductor 100μH	
	L40-1011-44	or	
Lg9	L30-0309-05	FM IFT	
Lg10	L30-0310-05	FM IFT	
Lg11	L40-2292-02	Inductor 2.2μH **(X05-1500-61)**	
	L40-2292-44	or	
Lg12	L40-1092-44	Inductor 1μH	
	L40-1092-03	or	
Lg13	L32-0205-15	AM OSC coil	
Lg14	L40-1021-45	Inductor 1mH	
	L40-1021-03	or	
Lg15	L30-0284-05	AM detector coil	
Lg16	L40-1021-45	Inductor 1mH	
	L40-1021-03	or	
Lg17	L40-1092-44	Inductor 1μH	
	L40-1092-03	or	
Lg19, 20	L79-0057-05	Low pass filter	☆
CFg1~4	L72-0052-05	FM ceramic filter	
CFg5	L72-0045-05	AM ceramic filter	
SWITCH			
Sg1	S01-3024-05	Rotary switch SELECTOR	☆
Sg2-1~4	S33-2035-05	Lever switch X 4	☆
Sg3	S31-2048-05	Slide switch DE-EMPHASIS	
MISCELLANEOUS			
—	B30-0084-05	Lamp X 5 8V, 50mA	
—	E29-0088-05	Terminal board	

PARTS LIST

POWER AMP (X07-1580-10)

Ref. No.	Parts No.	Description	Remarks
CAPACITOR			
Ce1, 2	CC45SL1H101K	Ceramic 100pF ±10%	
Ce3, 4	CE04W1C470	Electrolytic 47μF 16WV	
Ce5, 6	CE04AW1E3R3M	Electrolytic 3.3μF 25WV	
Ce7, 8	CE04W1J010	Electrolytic 1μF 63WV	
Ce9, 10	CC45SL1H040C	Ceramic 4pF ±0.25pF	
Ce11, 12	CC45SL1H100D	Ceramic 10pF ±0.5pF	
Ce13, 14	CC45SL1H180K	Ceramic 18pF ±10%	
Ce15, 16	CQ93M1H473K	Mylar 0.047μF ±10%	
Ce17, 18	CE04W1J470	Electrolytic 47μF 63WV	
Ce19~24	CE04W1J010	Electrolytic 1μF 63WV	
Ce25, 26	CQ93M1H473K	Mylar 0.047μF ±10%	
Ce27, 28	CQ93M1H124K	Mylar 0.12μF ±10%	
Ce29~32	CC45SL1H181K	Ceramic 180pF ±10%	
Ce33, 34	CQ93M1H104K	Mylar 0.1μF ±10%	
Ce35	CK45E2H103P	Ceramic 0.01μF +100%,−0%	
Ce70	CE04BW1A470M	Electrolytic 47μF 10WV	
Ce71	CE04AW1C470M	Electrolytic 47μF 16WV	
Ce72	CQ93M1H104K	Mylar 0.1μF ±10%	
RESISTOR			
Re11, 12	RD14GY2E430J	Carbon 43Ω ±5% 1/4W	
Re17, 18	RD14GY2E151J	Carbon 150Ω ±5% 1/4W	
Re21, 22	RD14GY2E101J	Carbon 100Ω ±5% 1/4W	
Re23, 24	RC05GF2H822K	Carbon 8.2kΩ ±10% 1/2W	
Re25, 26	RD14GY2E101J	Carbon 100Ω ±5% 1/4W	
Re29~34	RD14GY2E271J	Carbon 270Ω ±5% 1/4W	
Re35, 36	RD14GY2E272J	Carbon 2.7kΩ ±5% 1/4W	
Re41, 42	RD14GY2E331J	Carbon 330Ω ±5% 1/4W	
Re43, 44	RD14GY2E4R7J	Carbon 4.7Ω ±5% 1/4W	
Re45, 46	RD14GY2E331J	Carbon 330Ω ±5% 1/4W	
Re47, 48	RD14GY2E4R7J	Carbon 4.7Ω ±5% 1/4W	
Re49~52	R92-0167-05	Cement 0.22Ω ±5% 3W	
Re53, 54	RD14GY2E560J	Carbon 56Ω ±5% 1/4W	
Re55, 56	RS14GB3F100J	Metal film 10Ω ±5% 3W	
Re57, 58	RC05GF2H100K	Carbon 10Ω ±10% 1/2W	
Re70	RS14GB3D681J	Metal film 680Ω ±5% 2W	
Re87, 88	RD14GY2E270J	Carbon 27Ω ±5% 1/4W	
SEMICONDUCTOR			
Qe1~4	V01-0921-10	Transistor 2SA921(S), (T)	
Qe5~8	V03-0439-05	Transistor 2SC1885(R), (S)	
Qe9, 10	V01-0162-05	Transistor 2SA912(R), (S)	
Qe11, 12	V03-1890-30	Transistor 2SC1890A(D),(E),(F)	
Qe13, 14	V01-0188-05	Transistor 2SA913(Q), (R)	
Qe15, 16	V03-0468-05	Transistor 2SC1913(Q), (R)	
Qe17	V01-0893-10	Transistor 2SA893(D),(E),(F)	
	V01-0152-05	or 2SA750(E), (U)	
Qe18	V01-0084-05	Transistor 2SA733(Q), (R)	
		or 2SA564A(Q), (R)	
Qe19, 20	V03-0270-05	Transistor 2SC945(Q), (R)	
	V03-0504-05	or 2SC828A(Q), (R)	
Qe21	V03-0452-05	Transistor 2SC1735(D), (E)	
	V04-0438-10	or 2SD438MP(D), (E)	
Qe22	V03-1890-10	Transistor 2SC1890(D),(E),(F)	
	V03-0466-05	or 2SC1681(GR), (BL)	
Qe23, 24	V03-0455-05	Transistor 2SC1116	
Qe25, 26	V01-0176-05	Transistor 2SA747	
De1, 2	V11-0254-05	Diode YZ-140	
De3, 4	V11-5100-10	Varistor STV-4H (W)	
De5~8	V11-0273-05	Diode 1S2076A	
	V11-0203-05	or 1S1553	
De9, 10	V11-0271-05	Diode 1S2076	
	V11-0076-05	or 1S1555	
De11	V11-0295-05	Diode W06B	
MISCELLANEOUS			
Le1, 2	L39-0080-15	Phase compensator coil	
—	S51-4034-05	Relay	☆
—	E02-0209-05	Transistor socket X 4	

TONE CONTROL (X11-1450-10)

Ref. No.	Parts No.	Description	Remarks
CAPACITOR			
Ci1, 2	CE04W1H010	Electrolytic 1μF 50WV	
Ci3, 4	CE04W1A101	Electrolytic 100μF 10WV	
Ci5, 6	CC45SL1H101K	Ceramic 100pF ±10%	
Ci7, 8	CC45SL1H040D	Ceramic 4pF ±0.5pF	
Ci9, 10	CE04W1A101	Electrolytic 100μF 10WV	
Ci11, 12	CE04AW1E100M	Electrolytic 10μF 25WV	
Ci13, 14	CQ93M1H182K	Mylar 1800pF ±10%	
Ci15~18	CQ93M1H273K	Mylar 0.027μF ±10%	
Ci19~20	CE04AW1H010M	Electrolytic 1μF 50WV	
Ci23, 24	CE04AW1E100M	Electrolytic 10μF 25WV	
Ci25, 26	CC45SL1H100D	Ceramic 10pF ±0.5pF	
Ci27, 28	CE04AW1E3R3M	Electrolytic 3.3μF 25WV	
Ci29, 30	CQ93M1H334K	Mylar 0.33μF ±10%	
Ci31, 32	CE04W1E331	Electrolytic 330μF 25WV	
Ci34, 35	CC45SL1H221K	Ceramic 220pF ±10%	
RESISTOR			
Ri49, 50	RD14GY2E221J	Carbon 220Ω ±5% 1/4W	
SEMICONDUCTOR			
Qi1, 2	V01-0146-05	Transistor 2SA640(E), (F)	
Qi3, 4	V03-0424-05	Transistor 2SC1400(E), (F)	
Qi5, 6	V01-0146-05	Transistor 2SA640(E), (F)	
Qi7, 8	V03-0424-05	Transistor 2SC1400(E), (F)	
Di1, 2	V11-4101-70	Zener diode XZ-200	
POTENTIOMETER			
VRi1	R06-5030-05	200kΩ (MN) BALANCE	
VRi2, 3	R06-4036-05	50kΩ(B) X 2 TONE	☆
MISCELLANEOUS			
Li1	L40-1021-03	Ferri-inductor 1mH	
Si1, 2	S33-2034-05	Lever switch	☆

Note:

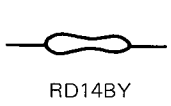
Resistors except the special type (example: cement, metal film, etc.) are not detailed in PARTS LIST. With regard to the value, refer to the schematic diagram or the PC board illustration.

Resistors not detailed are carbon type (1/4W or 1/8W).

You should give an order for the carbon resistors according to the ways described as follows:

A carbon resistor's part number is example RD-14BY 2E 222J.

1. Kinds of the carbon resistor



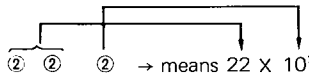
RD14BY

RD14CY

2. Wattage

1/4W	2E
1/8W	2B

3. Resistance value



② ② ② → means 22 X 10^2 = 2200Ω (2.2 kΩ)

Significant figure Multiplier

Example:		
	221	220Ω
	222	2.2kΩ
	223	22kΩ
	224	220kΩ
	225	2.2MΩ

4. Tolerance

J = ±5% (Gold color)

K = ±10% (Silver color)

ADJUSTMENT

INSTRUMENTS USED

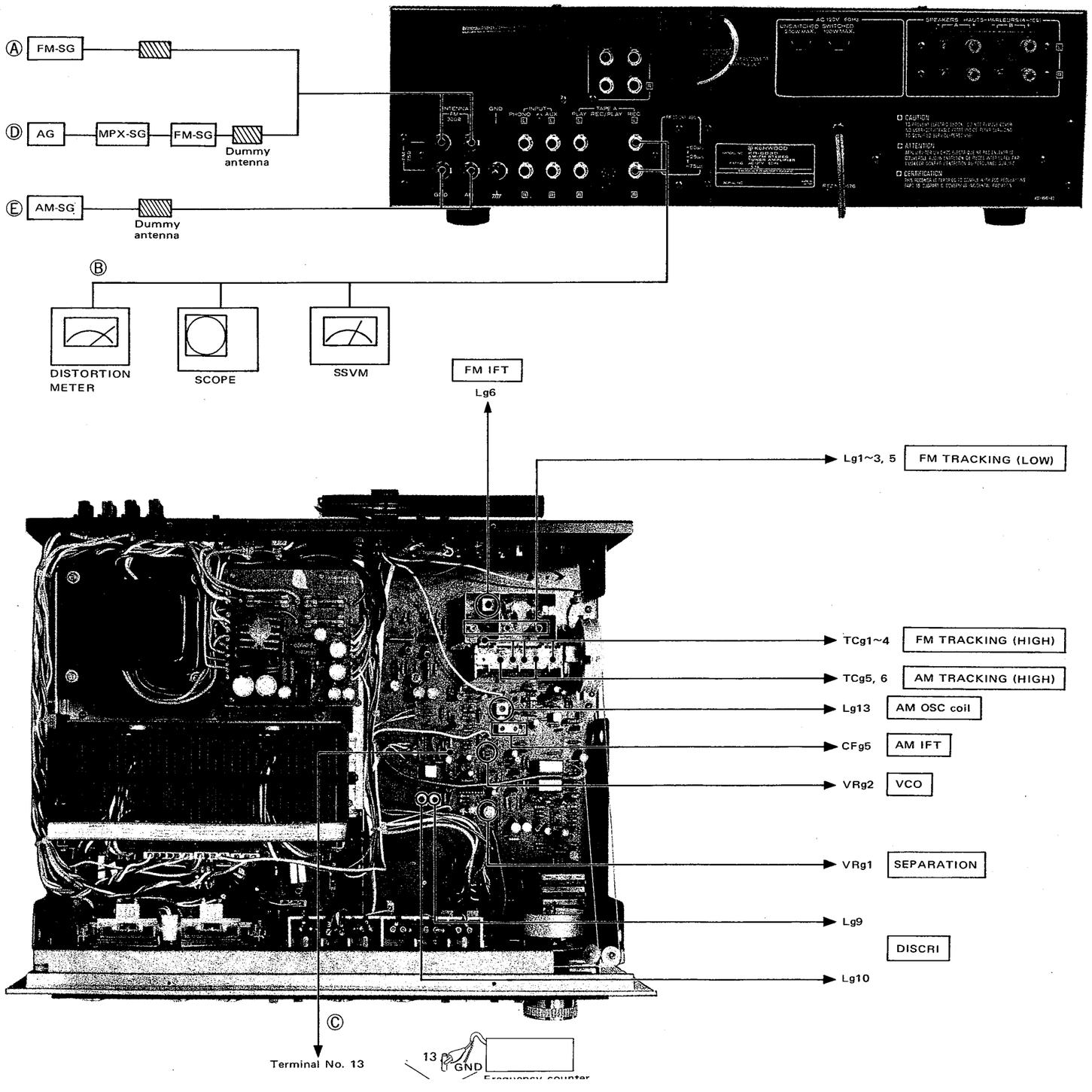
Oscilloscope . . . . . SCOPE
AM signal generator . . . . . AM-SG
FM signal generator . . . . . FM-SG
Audio generator . . . . . AG
Solid state voltmeter . . . . . SSVM
FM multiplex generator . . . . . FM-MPX
Frequency counter

NOTES FOR ADJUSTMENTS

* Use moderate instrument outputs at all times.
* Repeat tracking adjustments 2 or 3 times and finally confirm the result using respective local stations.
* The output level of RF-SG is made a loss by the dummy antenna.
* 0 dB = 1 μV

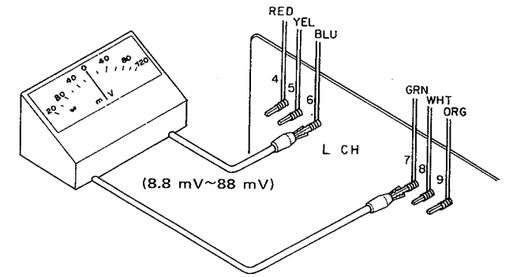
ORDER	ITEM	INSTRUMENT		RECEIVER SETTING	OUTPUT	ADJUSTMENT POINTS	ADJUSTMENT METHOD
		CONNECTION	SETTING				
FM SECTION							
1	IFT	Ⓐ	95 MHz 1 kHz (Mod) 75 kHz (Dev)	FM 95 MHz FM MUTING OFF	Ⓑ	Lg6	Maximum optimum waveform, minimum distortion.
2	DISCRI	–	–	FM FM MUTING OFF Noise (between local stations)	T meter	Lg9	Meter indication in the center.
3		Ⓐ	95 MHz 60 dB 1 kHz (Mod) 75 kHz (Dev)	FM 95 MHz FM MUTING OFF	Ⓑ	Lg10	Maximum optimum waveform, minimum distortion.
4	TRACKING	Ⓐ	90 MHz 1 kHz (Mod) 75 kHz (Dev)	FM 90 MHz FM MUTING OFF	Ⓑ	Lg1~3, 5	Maximum optimum waveform.
5			106 MHz (Dev) 1 kHz (Mod) 75 kHz (Dev)	FM 106 MHz FM MUTING OFF		TCg1~4	
6	VCO	Ⓐ	95 MHz 60 dB 0 (Dev)	95 MHz	Ⓒ	VRg2	Adjusted to 19 kHz.
7	SEPARATION	Ⓓ	FM-MPX: SELECTOR L or R 1 kHz (Mod) FM-SG: 95 MHz 60 dB 68.25 kHz (Dev)	FM 95 MHz FM MUTING OFF	Ⓑ	VRg1	Minimum output. L and R are reversed and the same adjustment is performed. If any difference is found, the output levels are adjusted to the average value.
8	IFT	Ⓓ	FM-MPX: SELECTOR L + R 1 kHz (Mod) FM-SG: 95 MHz 60 dB 68.25 kHz (Dev)	95 MHz	Ⓑ	Lg6	Maximum optimum waveform. Minimum distortion.
AM SECTION							
1	IFT	Ⓔ	1000 kHz 400 Hz 30% (Mod) 100 dB	AM 1000 kHz	Ⓑ	CFg5	Maximum optimum waveform.
2	TRACKING	Ⓔ	600 kHz 400 Hz 30% (Mod) 100 dB	AM 600 kHz	Ⓑ	Lg13 Bar antenna	Maximum optimum waveform.
3			1400 kHz 400 Hz 30% (Mod) 100 dB	AM 1400 kHz		TCg5, 6	

ADJUSTMENT



BIAS CURRENT

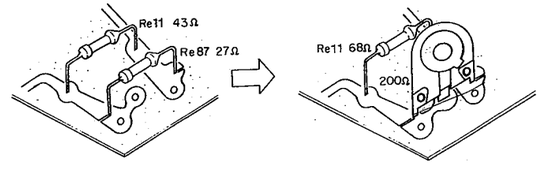
There is no adjustment to be made by trimming potentiometer in a conventional manner. Re11 (Re12) and Re87 (Re88) in parallel connection are provided in place of trimming potentiometers. It is necessary to confirm the bias current when the power transistors (Qe23 ~ Qe26), the driver transistors (Qe13 ~ 16) or the varistors (De3, 4) are replaced. The bias current must be within the range of 20 ~ 200 mA.



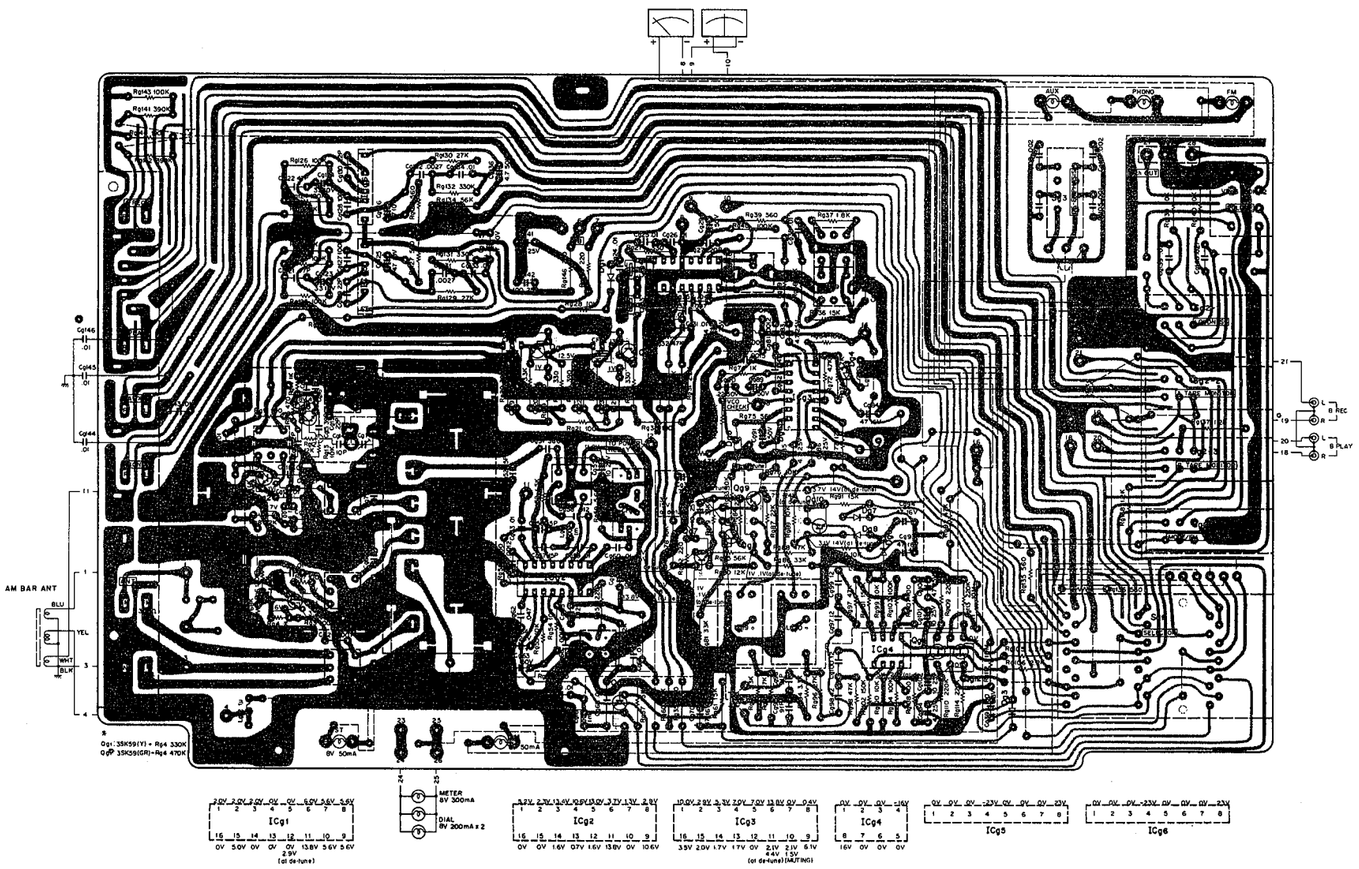
Before checking, turn VOLUME fully counterclockwise.)

If the bias current is without the range of 20 ~ 200 mA, readjust it using the trimming potentiometer as follows:

① Remove Re87 (Re88).
② Change the resistance value of Re11 (Re12) from 43Ω to 68Ω.
③ Insert the trimming potentiometer (200Ω, R12-0055-05) into the mounting holes.
④ Readjust

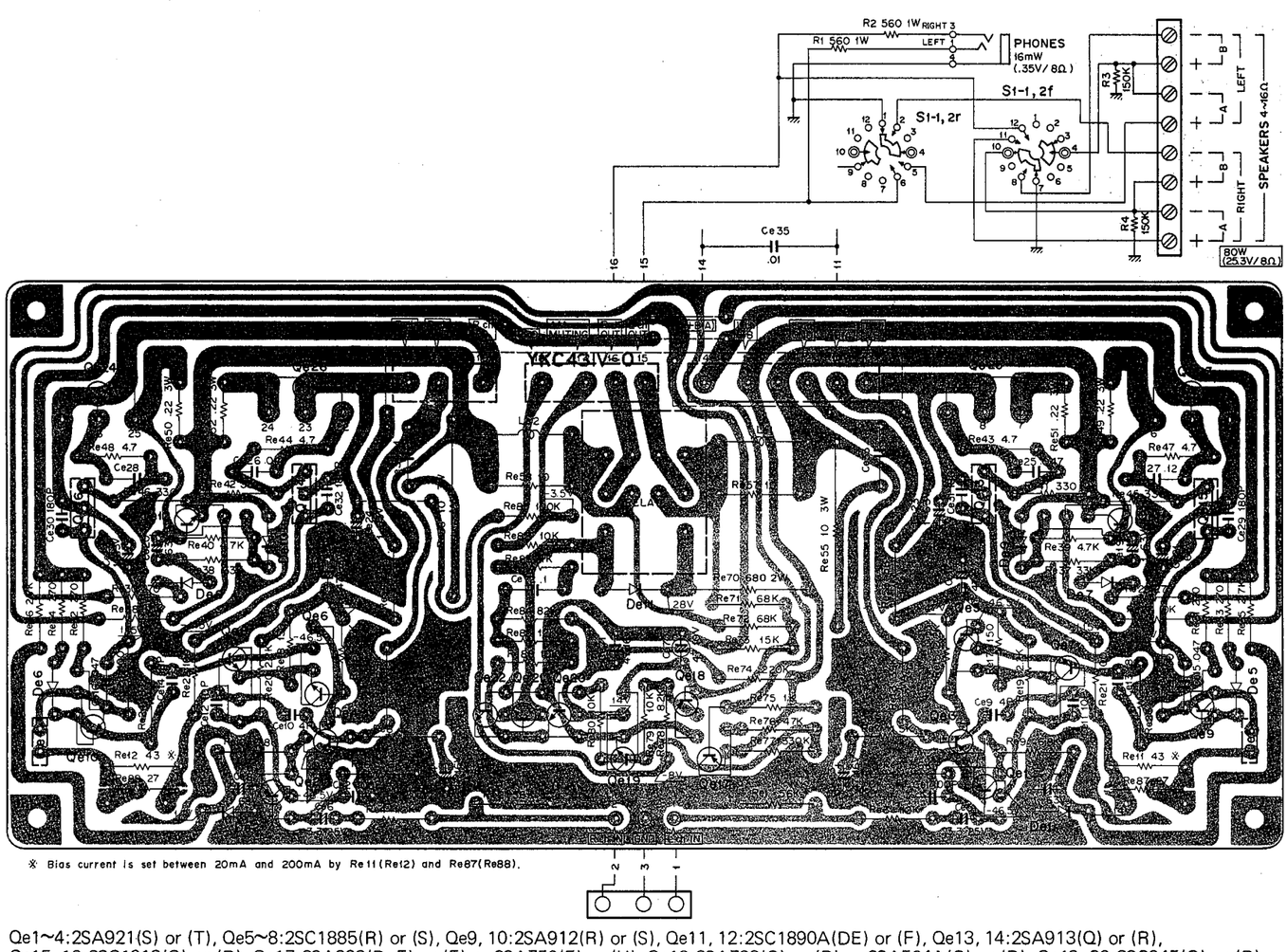


TUNER (X05-1500-10)



Qg1:3SK59(Y) or (GR), Qg2, 4, 5:2SC1923(R) or (O), Qg3:2SC1342(A) or (B), Qg6~9:2SC945(P) or (Q) or (R) or 2SC828A(P) or (Q) or (R), Qg10:2SA733(P) or (Q), or 2SA564A or 2SA841(GR) or (BL) or 2SA640(E) or (F), Qg11, 12:2SK117(Y) or (GR) or (BL) or 2SK68(L) or (M) or 2SK105(F) or (H), ICg1:HA1137W, ICg2:HA1197 or LA1240, ICg3:LA3350S-L6, ICg4:NJM4558D, ICg5, 6:HA1457, Dg1~3, 5~9:1S1555 or 1S2076, Dg4:WZ-100

POWER AMP (X07-1580-10)

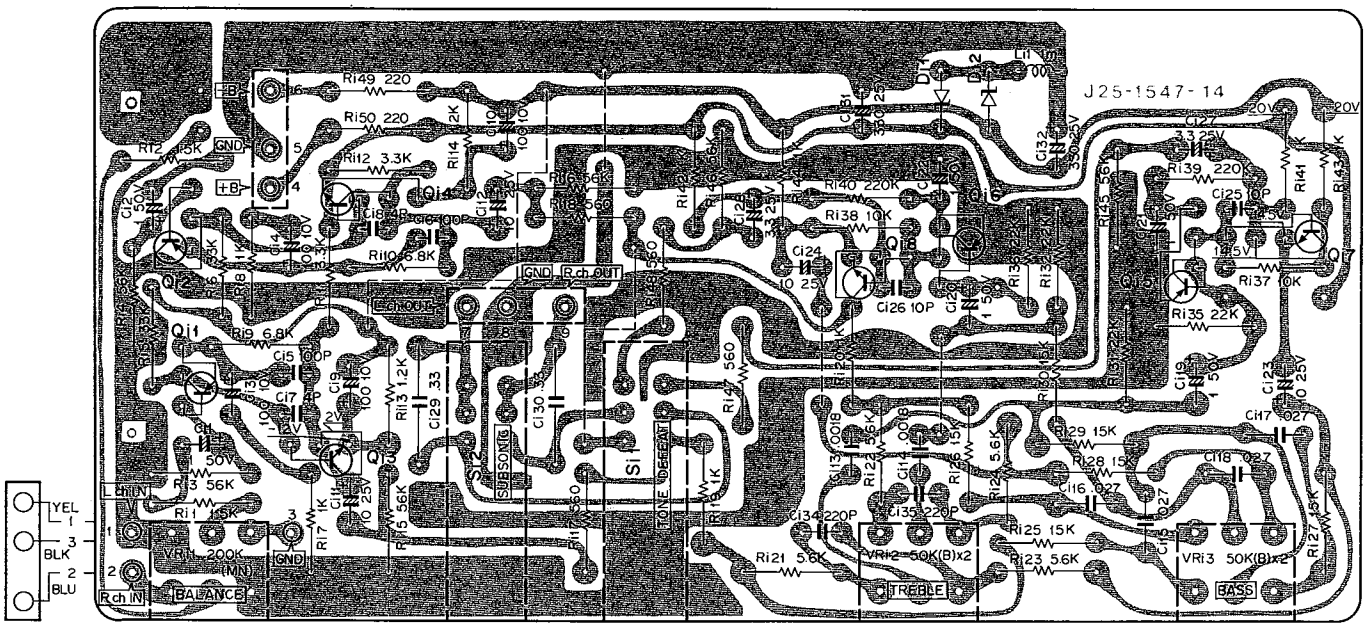


※ Bias current is set between 20mA and 200mA by Re11(Re12) and Re87(Re88).

Qe1~4:2SA921(S) or (T), Qe5~8:2SC1885(R) or (S), Qe9, 10:2SA912(R) or (S), Qe11, 12:2SC1890A(DE) or (F), Qe13, 14:2SA913(Q) or (R), Qe15, 16:2SC1913(Q) or (R), Qe17:2SA893(D, E) or (F) or 2SA750(E) or (U), Qe18:2SA733(Q) or (R) or 2SA564A(Q) or (R), Qe19, 20:2SC945(Q) or (R) or 2SC828A(Q) or (R), Qe21:2SC1735(D) or (E) or 2SD438MP(D) or (E), Qe22:2SC1890(D,E) or (F) or 2SC1681(GR) or (BL), Qe23, 24:2SC1116, Qe25, 26: 2SA747, De1, 2:YZ-140, De3, 4:STV-4H(W), De5~8:1S2076A or 1S1553, De9, 10:1S2076 or 1S1555, De11:W06B

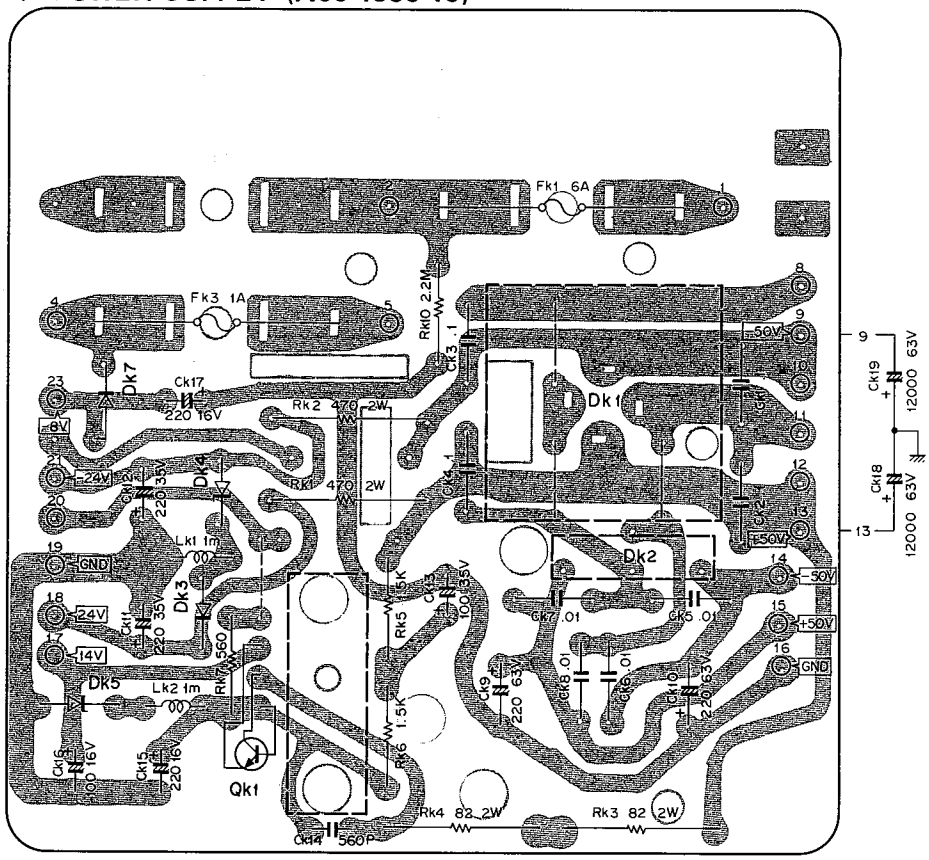
PC BOARD

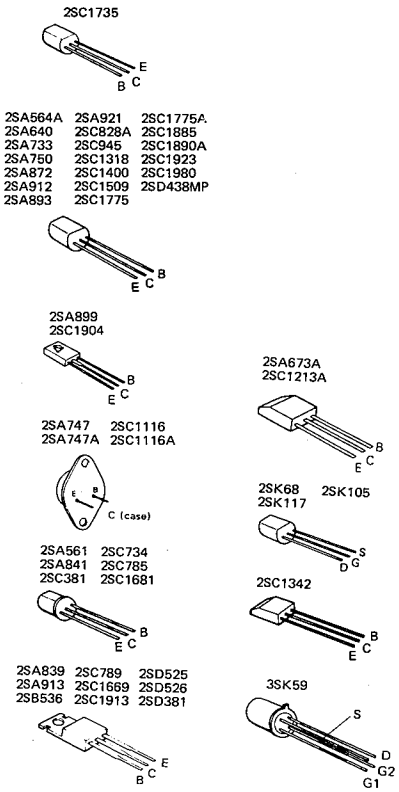
▼ TONE CONTROL (X11-1450-10)



Qi1, 2, 5, 6:2SA640(E) or (F), Qi3, 4, 7, 8:2SC1400(E) or (F), Di1, 2:XZ-200

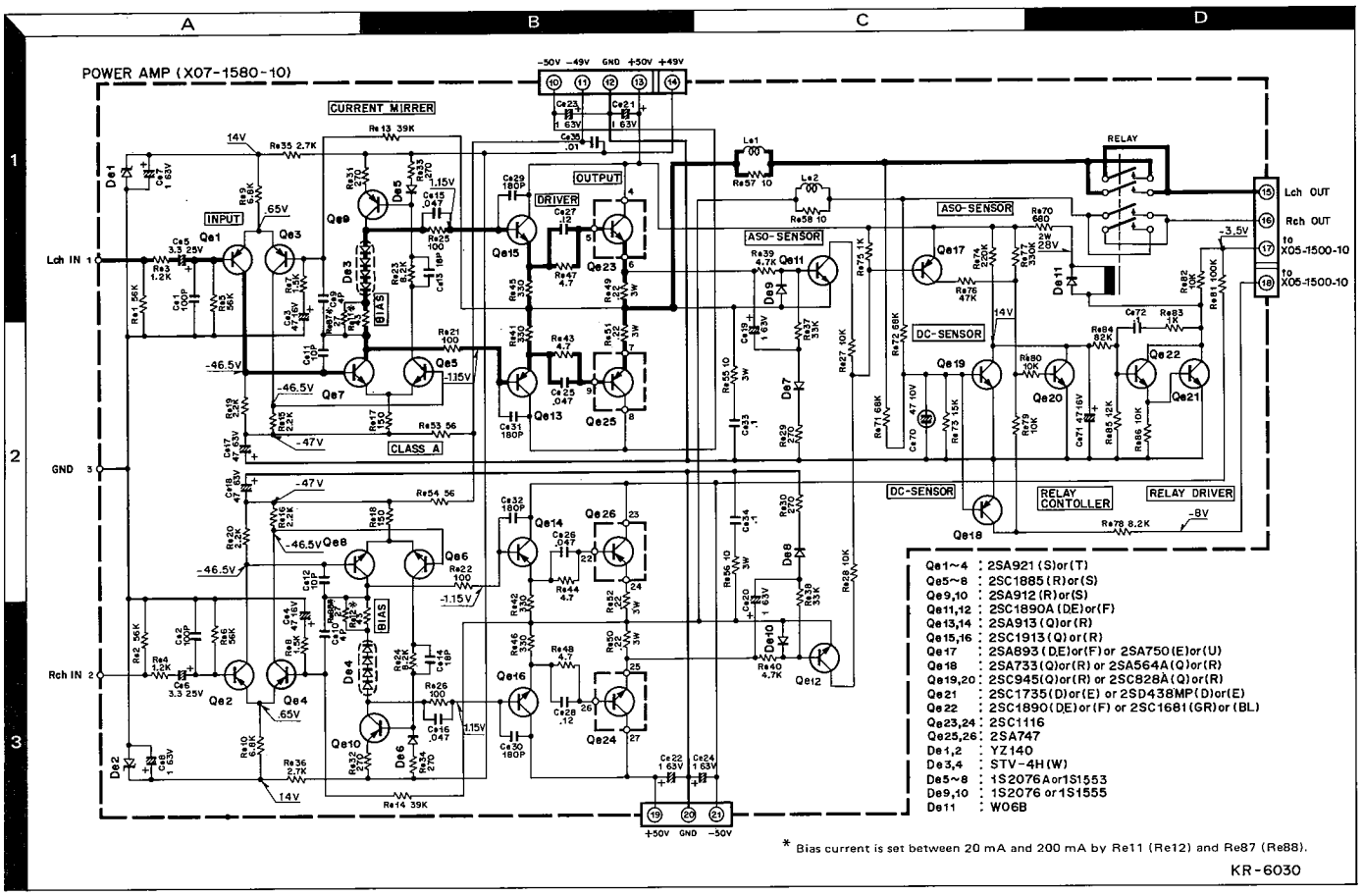
▼ POWER SUPPLY (X00-1960-10)





Qk1:2SC789 or 2SD526, Dk1:M4C5, Dk2:SIRBA-20, Dk3, 4:WZ-240, Dk5:YZ-140, Dk7:W06B

SCHEMATIC DIAGRAM



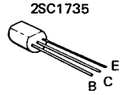
* Bias current is set between 20 mA and 200 mA by Re11 (Re12) and Re87 (Re88).

KR-6030

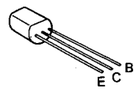
Semiconductor Name	Substitutions	Semiconductor Name	Substitutions
(X00-1960-10)		Qe15, 16: 2SC1913(Q), (R)	2SD381(L), (M), 2SC1669
Qk1: 2SC789, 2SD526	2SD525	Qe17: 2SA893(D), (E), (F) 2SA750(E), (U)	2SA872
(X05-1500-10)		Qe18: 2SA733(Q), (R) 2SA564A(Q), (R)	2SA561, 2SA673A
Qg1: 3SK59(GR, Y)	3SK45(B), (C)	Qe19, 20: 2SC945(Q), (R) 2SC828A(Q), (R)	2SC734
Qg2: 2SC1923(R), (O)	2SC381(R), (O), 2SC785(R),(O)		2SC1213A(B), (C)
Qg3: 2SC1342(A), (B)	2SC785(R)		2SC1318(Q), (R)
Qg4, 5: 2SC1923(R), (O)	2SC381(R), (O), 2SC785(R),(O)		2SC1775(D), (E)
Qg6~9: 2SC945(P),(Q), (R) 2SC828A(P), (Q), (R)	2SC734(Y)	Qe21: 2SC1735(D), (E) 2SD438MP(D), (E)	2SC1509(Q), (R)
Qg10: 2SA733(P), (Q) 2SA564A 2SA841(GR),(BL)	—	Qe22: 2SC1890(D), (E), (F) 2SC1681(GR), (BL)	2SC1775(D), (E), (F) 2SC1775A(D), (E)
Qg11, 12: 2SK117(Y), (GR), (BL) 2SK68(L), (M) 2SK105(F), (H)	—	Qe23, 24: 2SC1116	2SC1116A
	—	Qe25, 26: 2SA747	2SA747A
	—	**(X11-1450-10)**	
(X07-1580-10)		Qi1, 2, 5, 6: 2SA640(E), (F)	2SA750(E), (F), 2SA872(D), (E)
Qe1~4: 2SA921(S, T)	2SA872, 2SA872A	Qi3, 4, 7, 8: 2SC1400(E), (F)	2SC1775(E), (F), 2SC1775A(E),(F)
QQe5~8: 2SC1885(R, S)	2SC1904(B), (V)		2SC1980(S), (T)
Qe9, 10: 2SA912(R, S)	2SA899(B), (V)		
Qe11, 12: 2SC1890A(D), (E), (F)	2SC1980		
Qe13, 14 2SA913(Q), (R)	2SB536(L), (M), (K) 2SA839		

SCHEMATIC DIAGRAM

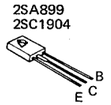
2SC1735



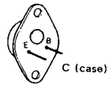
2SA564A 2SA921 2SC1775A
2SA640 2SC828A 2SC1885
2SA733 2SC945 2SC1890A
2SA750 2SC1318 2SC1923
2SA872 2SC1400 2SC1980
2SA912 2SC1509 2SD438MP
2SA893 2SC1775



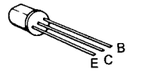
2SA899
2SC1904



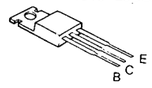
2SA747 2SC1116
2SA747A 2SC1116A



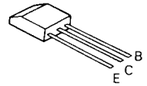
2SA561 2SC734
2SA841 2SC785
2SC381 2SC1681



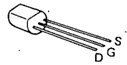
2SA839 2SC789 2SD525
2SA913 2SC1669 2SD526
2SB536 2SC1913 2SD381



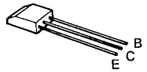
2SA673A
2SC1213A



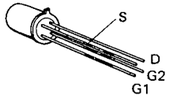
2SK68 2SK105
2SK117

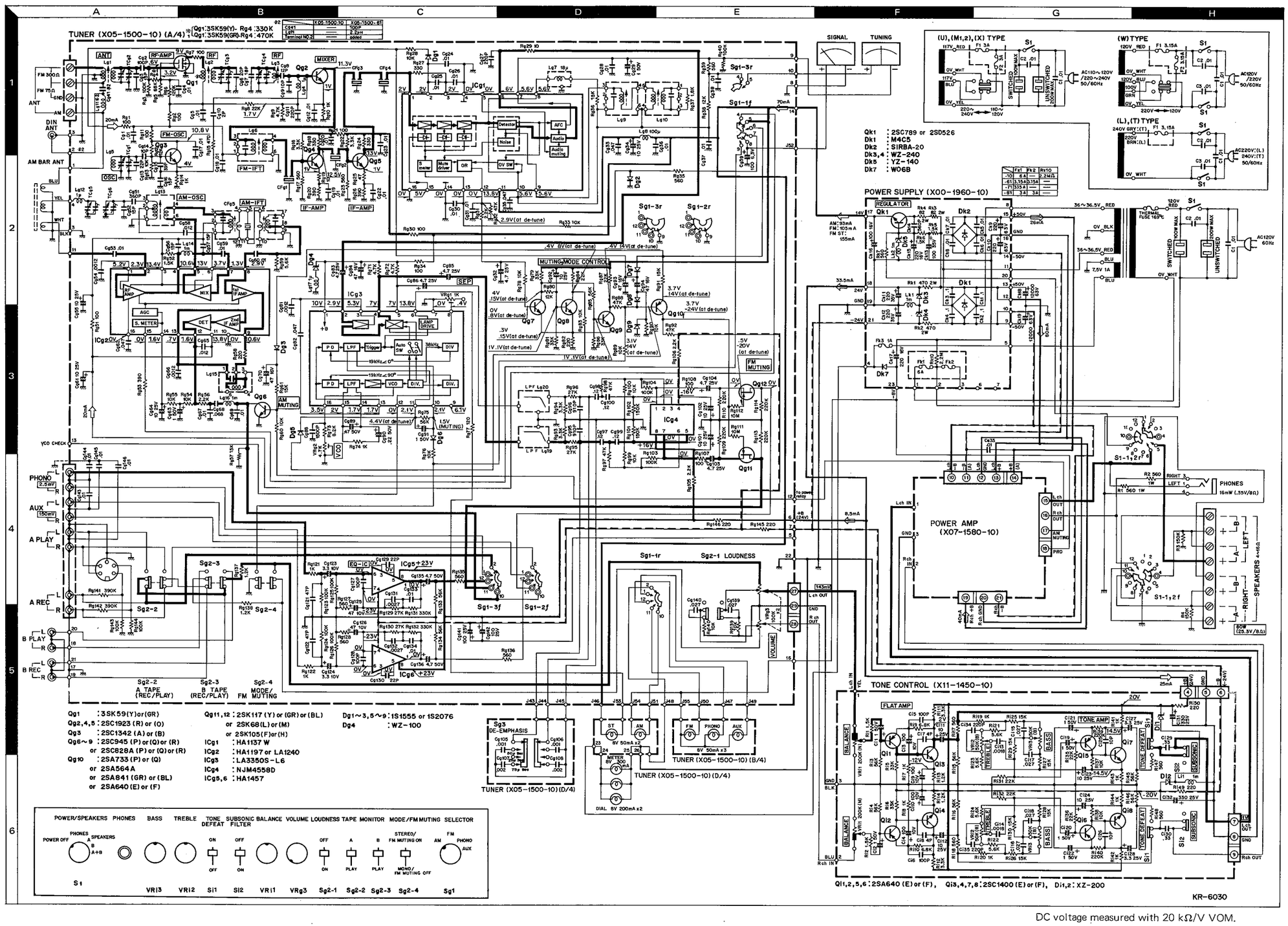


2SC1342



3SK59





DC voltage measured with 20 kΩ/V VOM.

KR-6030

SPECIFICATIONS

AMPLIFIER SECTION

Power Output

80 watts per channel, minimum RMS both channels driven, at 8 ohms from 20 to 20,000 Hz with no more than 0.1% total harmonic distortion.

Both Channels Driven	83 + 83 W 8 Ω at 1,000 Hz
	100 + 100 W 4 Ω at 1,000 Hz
Dynamic Power Output	340 W 4 Ω
Total Harmonic Distortion	0.1% at rated power into 8 Ω
	0.05% at 1/2 rated power into 8 Ω
Intermodulation Distortion (60 Hz : 7 kHz = 4 : 1)	0.1% at rated power into 8 Ω
	0.05% at 1/2 rated power into 8 Ω
Power Bandwidth	5 Hz to 50,000 Hz
Damping Factor	50 at 8 Ω
Speaker Impedance	Accept 4 Ω to 16 Ω
Input Sensitivity/Impedance/Signal to Noise Ratio (IHF A curve)	
Phono	2.5 mV/50 kΩ/75 dB
AUX	150 mV/45 kΩ/98 dB
Tape	150 mV/45 kΩ/98 dB
Maximum Input Level for Phono	250 mV (RMS), T.H.D. 0.1% at 1,000 Hz
Output Level/Impedance	
Tape REC (Pin)	150 mV/100 Ω
(DIN)	30 mV/80 kΩ
Frequency Response	
Phono	RIAA standard curve +0.3, −0.3 dB
AUX and Tape	10 Hz to 50,000 Hz +0, −1.0 dB
Tone Control	
Bass	±10 dB at 100 Hz
Treble	±10 dB at 10 kHz
Subsonic Filter	18 Hz (6 dB/oct.)
Loudness Control (−30 dB)	+9 dB at 100 Hz

FM TUNER SECTION (IHF)

Usable Sensitivity	9.8 dBf (1.7 μV)
50 dB Quieting Sensitivity	
Mono	14.1 dBf (2.8 μV)
Stereo	36.3 dBf (36 μV)
Signal to Noise Ratio at 65 dBf	
Mono	73 dB
Stereo	68 dB
Total Harmonic Distortion at 65 dBf	
Mono	0.15%
Stereo	0.25%
Frequency Response	20 Hz to 15,000 Hz + 0.5, −2.0 dB
Capture Ratio	1.2 dB
Image Response Ratio	75 dB
Spurious Response Ratio	95 dB
IF Response Ratio (Balanced)	90 dB
Alternate Channel Selectivity	85 dB
AM Suppression Ratio	60 dB
Stereo Separation Ratio	45 dB at 1,000 Hz
	35 dB at 50 Hz to 15,000 Hz
Sub Carrier Product Ratio	62 dB
Antenna Impedance	300 Ω balanced
	75 Ω unbalanced
FM Frequency Range	88 MHz to 108 MHz

AM SECTION

Usable Sensitivity	15 μV
Signal to Noise Ratio	50 dB
Image Rejection	50 dB
Selectivity	33 dB

GENERAL

Power Consumption	600 W at full power		
AC Outlet	Switched 1, Unswitched 1		
Dimensions	W	18-29/32"	(480 mm)
	H	5-7/8"	(149 mm)
	D	15-15/16"	(405 mm)
Weight			
(Net)	30.9 lbs	(14.0 kg)	
(Gross)	35.2 lbs	(16.0 kg)	

Note:
Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

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